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## KLAMATH WATERFOWL MAT STAGE A GOOD COMEBACK

The drying up of some of the lake beds in southern Oregon and northern California has been a destructive blow to water-fowl. If the dry cycle has ended, a more abundant water supply in the Klamath country will reflood some areas, and ducks and geese may regain some of their lost numbers.

There is a wide difference in the conditions of the soil in and around the various lake beds of the Klamath watershed.

Lower Klamath Lake was a settling basin where the water flowed in and out and was maintained at the same level as the Klamath River. A large part of this lake bed was filled with decayed vegetation, yet it was so permeated with alkali that when dried up it was useless for agriculture. In its original condition, it was one of the most valuable wildlife sanctuaries in the United States.

Tule Lake, lying to the south and east of Lower Klamath, was fed by the waters of Lost River. It had no visible outlet, but it was always taken for granted that the water had an underground passage through the lava beds to the south. The bed of this lake was composed of decayed animal and vegetable matter with comparatively little alkali. Since it was drained, this lake bed has proven very valuable for the production of different farm crops, such as alfalfa, grain and potatoes.

The business interests of Klamath Falls naturally want to see as much of this land kept under cultivation as possible because of the large crops produced. The opinion of the Reclamation Service from the beginning has been that only a part of this wide lake bed could be kept under permanent cultivation. A proven principle of Reclamation is that where lands are irrigated, there must be a lower

area where the waste water can be drawn off after the cultivated lands are sufficiently watered. Therefore the shotsesouthern half of Tule Lake bed was set aside as a sump.

Instead of using the whole area as a sump, the Reclamation Service built a dike around 10,000 acres and pumped the waste water into this smaller sump, which by Executive Order was set aside as Tule Lake Wildlife Refuge. During the dry cycle of the past few years, this sump was sufficient to hold the waste water. The Reclamation Service leased the balance of the sump area to farmers, who produced as large crops as those on the northern half. Last summer, the water supply would have overflowed the dikes of Tule Lake Refuge if it had not been drawn off into the larger sump through the canal that flows out to the southeast.

If a wet cycle of years follows, the present sump area will necessarily have to be enlarged. This means the elimination of some land now under cultivation. It may not please the present lessees who have greatly profited by large crops at a small rental of from \$2 to \$4 per acre per year. If the size of Tule Lake Refuge is increased, the ducks and geese will have a big celebration. They may even have the laugh on the farmers and the Reclamation Service if they have to restore to its original condition some of the old lake bed that was drained.